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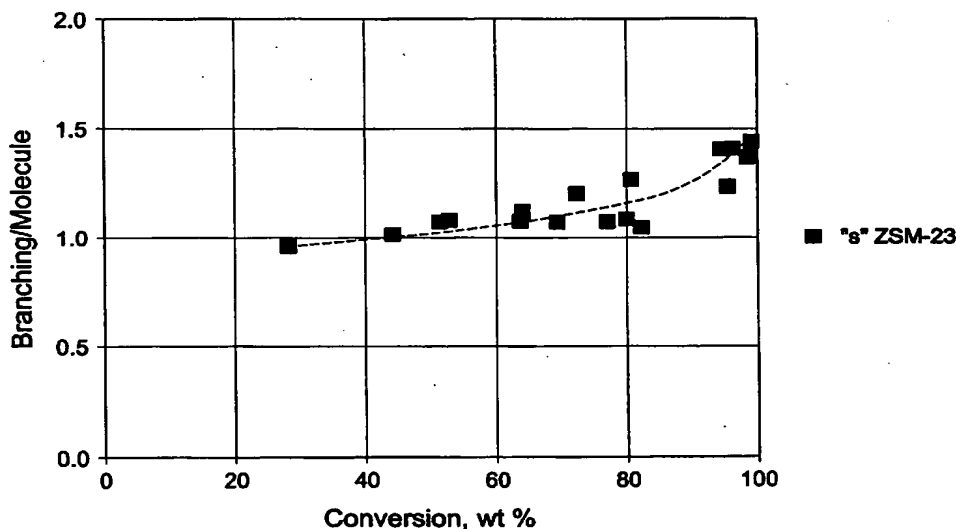
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(54) Title: OLIGOMERIZATION OF OLEFINS

Dodecene Branching vs. Conversion



RAMIFICATION/MOLECULE
BB... RAMIFICATION DE TETRAPROPYLENE EN
COMPARAISON A SA CONVERSION
CC... CONVERSION, % EN POIDS

(57) Abstract: A selectivated molecular sieve, e.g., ZSM-22 or ZSM-23, is used as olefin oligomerization catalyst to provide prod-
uct, e.g., octenes and dodecenes from butene, having a low degree of branching and hindered double bonds.

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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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Declarations under Rule 4.17:

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GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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Published:

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Simplified Oligomerization Process

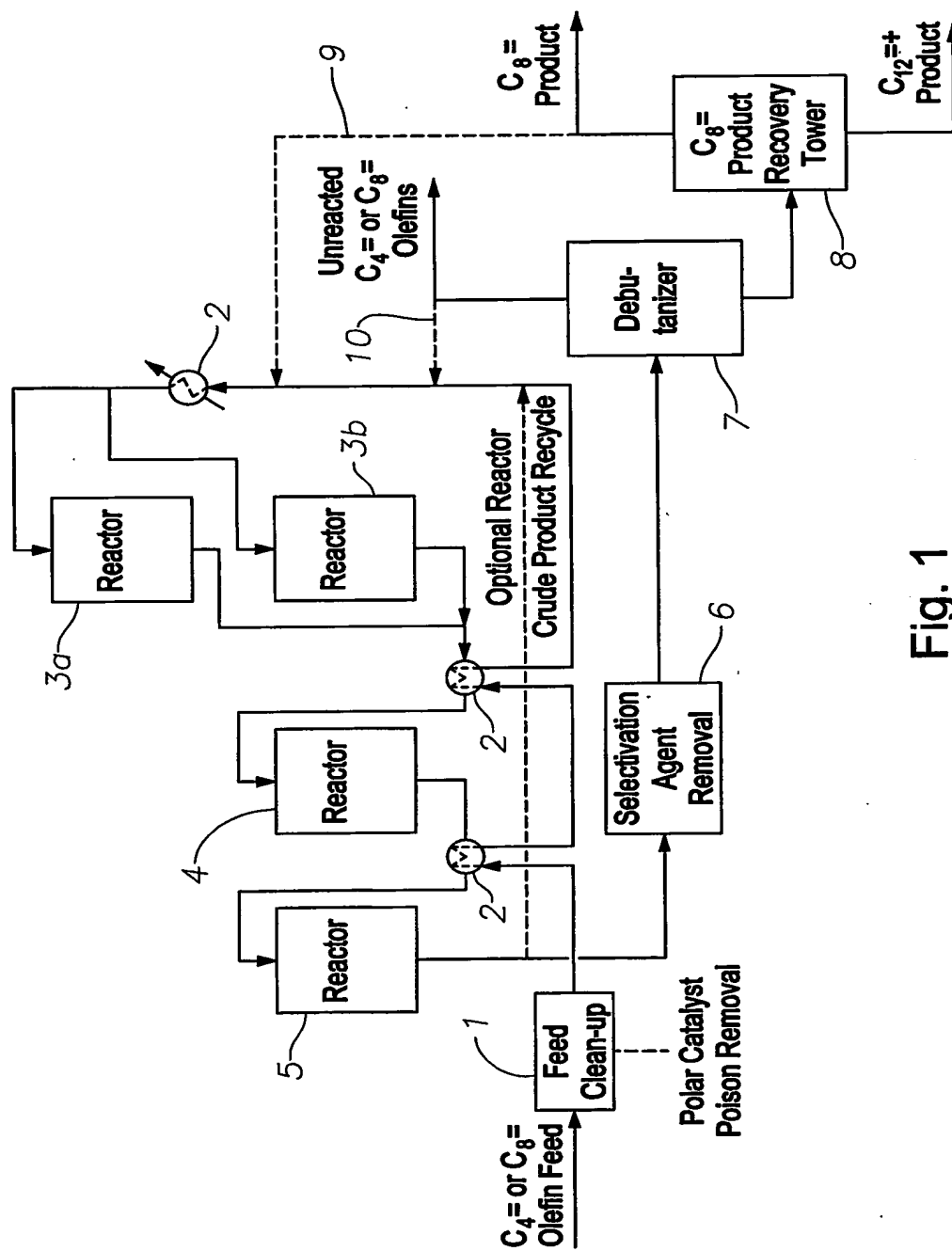


Fig. 1

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Octene Branchiness as a Function of Conversion

Butene Oligomerization Data

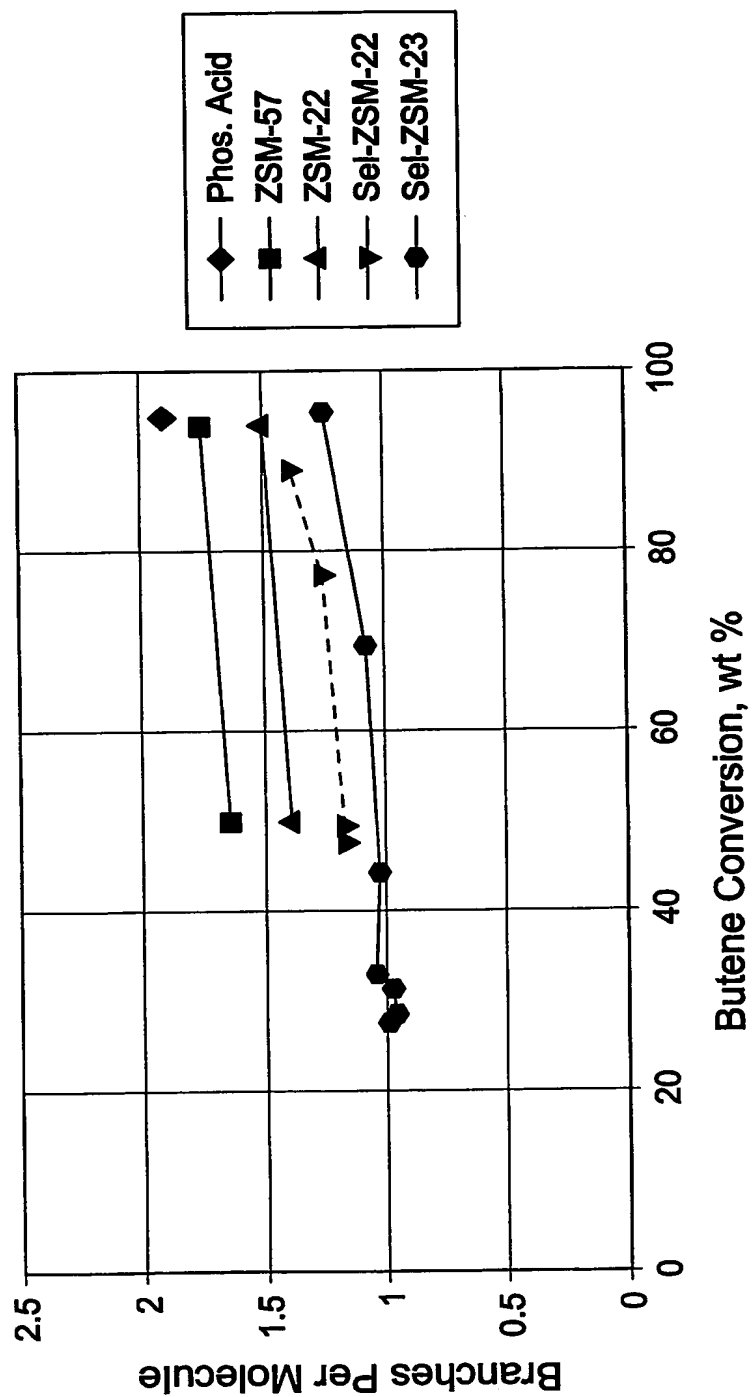


Fig. 2

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Hydroformylation of Lightly Branched, and Low Tetrasubstituted Double Bond Octenes Results in Faster Reaction Rates and Improved Yields.

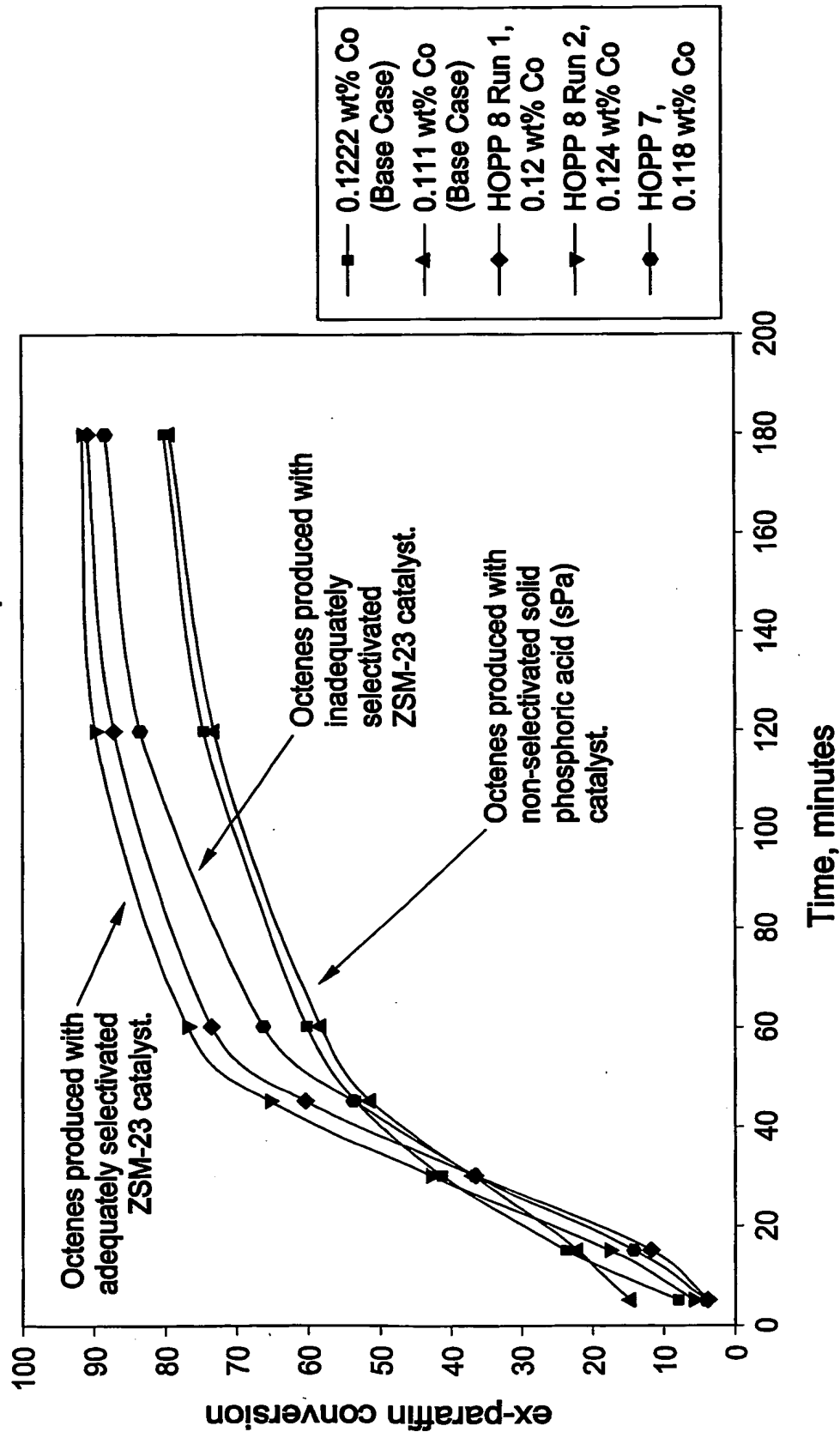


Fig. 3

Simplified Oligomerization Process

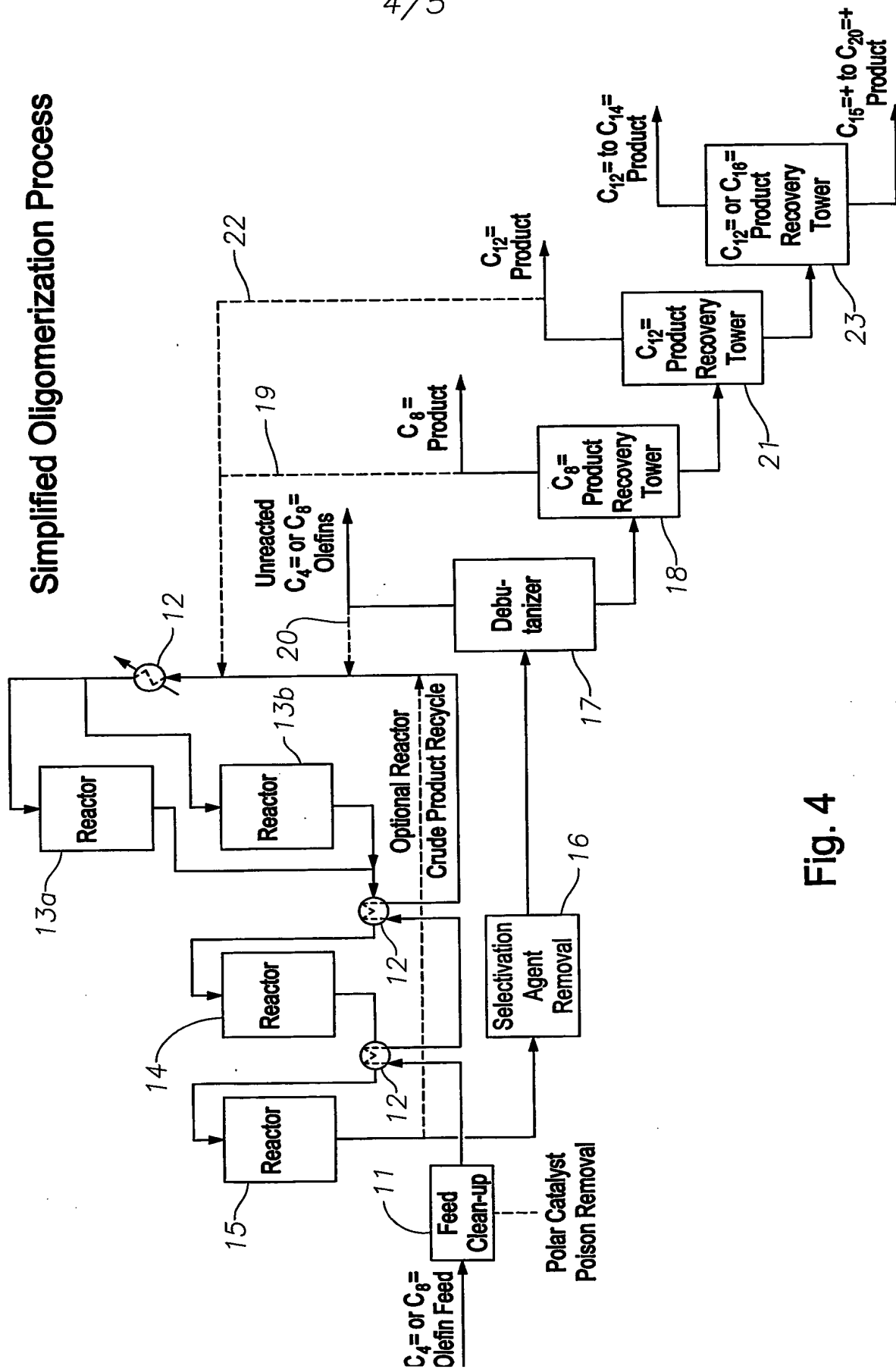


Fig. 4

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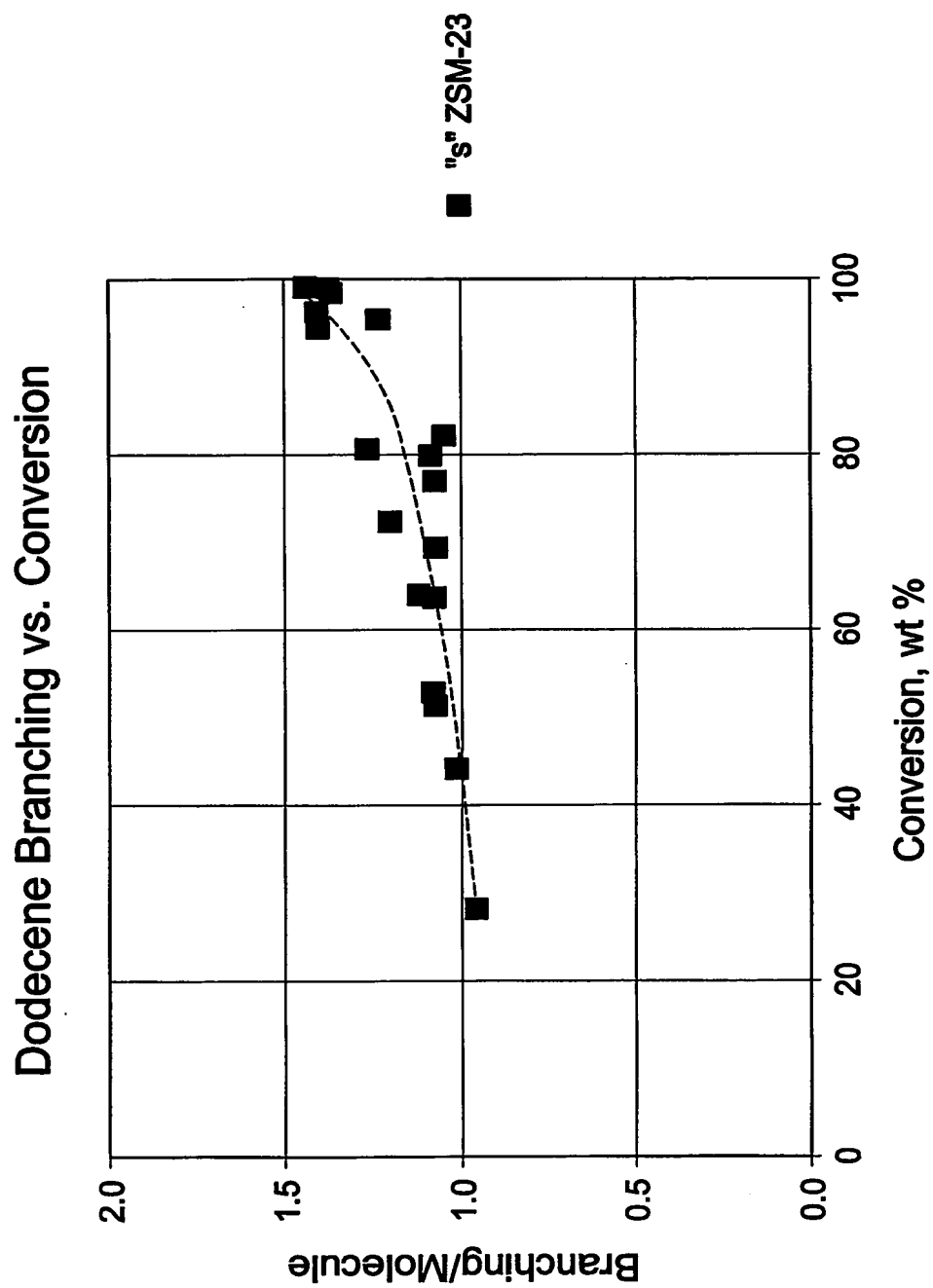


Fig. 5

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/09591

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C07C2/12 C10M105/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C07C C10M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

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Y	column 2, line 67 - column 3, line 47 claims	22-38
X	US 5 284 989 A (APELIAN MINAS R ET AL) 8 February 1994 (1994-02-08)	1-21
Y	column 3, line 35 - line 63 column 4, line 57 - line 59 column 10, line 7 - line 12 examples 4,5	22-38
Y	WO 96 22264 A (RIJKE JAN MARTIN DE ; EXXON RESEARCH ENGINEERING CO (US); EXXON CHE) 25 July 1996 (1996-07-25) the whole document	22-38
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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